

**COMMUNITY-BASED ENVIRONMENTAL PROTECTION (CBEP):
ACCOMPLISHMENTS AND VALUE-ADDED OF EPA CBEP PROJECTS**

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ACRONYMS

CBEP	Community-Based Environmental Protection
EPA	Environmental Protection Agency
GIS	Geographic Information System
GPRA	Government Performance and Results Act
LaMP	Lakewide Management Plan
MACT	Maximum Achievable Control Technology
NEP	National Estuary Program
NEPA	National Environmental Policy Act
NPR	National Performance Review
NRCS	Natural Resource Conservation Service
OSEC	Office of Sustainable Ecosystems and Communities
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RGI	Regional Geographic Initiative
SEE	Senior Environmental Employee

1. INTRODUCTION

In 1995, EPA began promoting Community-Based Environmental Protection (CBEP) as an Agency-wide approach to address challenging environmental problems in priority places through collaboration with local stakeholders and involved state, tribal, or federal agencies. The CBEP approach emphasizes holistic, interdisciplinary perspectives and approaches that integrate human health, ecological integrity, and economic sustainability. EPA's ten regions currently are involved in approximately 300 CBEP projects.

This report, which was prepared for EPA's Office of Sustainable Ecosystems and Communities (OSEC), summarizes the accomplishments of CBEP projects by the EPA regions and the value-added of the CBEP approach. Specifically, three objectives of CBEP are addressed:

- **Integrating CBEP into EPA Programs and Reorienting Activities** -- CBEP was designed as an agency-wide approach for use by all of EPA's existing media-based programs. Section 2 of this report evaluates the participation of EPA's media and statutory programs in CBEP projects and the extent to which the programs have adopted CBEP principles.
- **Working with Communities** -- CBEP was designed to provide local stakeholders with opportunities for meaningful participation in environmental decision-making. CBEP also is intended to build the capacity of local communities and stakeholders to conduct CBEP activities on their own when direct participation by EPA is impractical or unnecessary. Capacity building can include grants, technical assistance, or training. Section 3 of this report evaluates the accomplishments and value-added of EPA's work with communities.
- **Achieving Environmental Results** -- CBEP projects are intended to produce measurable environmental benefits. Examples of environmental results attained through CBEP projects are presented in section 4, along with examples of other benefits.

The information presented in this report is based on interviews conducted with five Regional CBEP Coordinators and 34 Regional CBEP Project Leaders in five EPA regions: 4, 5, 7, 8, and 10. In addition, data were gathered for 87 projects in six regions. More information on the methodology is presented in the companion report *Community-Based Environmental Protection (CBEP): Characterization of EPA Regional CBEP Activities* (U.S. EPA, 1999). That report characterizes CBEP activities in EPA's 10 regions and examines the use of CBEP principals identified in EPA's *Draft CBEP Framework* (U.S. EPA, 1998). In addition, it examines how CBEP attributes are defined

in practice by the EPA regions and identifies which attributes the regions have found to be most essential for successful CBEP projects.

This report does not characterize all ongoing CBEP activities or successes, because it focuses on a sample of projects in six of EPA's ten regions. Thus, this report cannot be used to compare progress in implementing CBEP across the EPA regions. Instead, this report summarizes the accomplishments and value-added of CBEP, as listed in Exhibit 1 and described in more detail in sections 2, 3, and 4. Conclusions of this report are presented in section 5, and section 6 identifies the references cited.

Exhibit 1

Accomplishments and Value-Added of CBEP

INTEGRATING CBEP INTO EPA PROGRAMS

- EPA's base programs lead EPA's participation in most CBEP projects
- EPA's base programs use CBEP to solve difficult challenges and add value to existing efforts
- EPA's base programs use CBEP to solve problems that cut across media- or statutory-lines or that would not otherwise be addressed

WORKING WITH COMMUNITIES

- New institutions and partnerships are forming to resolve environmental problems using CBEP principles
- CBEP produces innovative and effective educational techniques and resources
- CBEP builds the capacity of communities to solve environmental problems on their own
- EPA provides technical assistance to support science-based environmental management decisions
- CBEP provides opportunities for locally-led decisions and meaningful public participation

ACHIEVING ENVIRONMENTAL RESULTS AND OTHER ACCOMPLISHMENTS

- CBEP produces tangible benefits in environmental quality
- CBEP addresses long-term environmental challenges
- CBEP provides high-quality data resources to support environmental management decisions
- CBEP improves community perceptions of EPA

2. INTEGRATING CBEP INTO EPA PROGRAMS

The CBEP approach seeks to re-orient EPA's traditional programs towards more integrated and place-based activities. For example, staff from EPA's media- and statute-oriented programs can use CBEP to work cooperatively on multimedia environmental issues in priority places. This section examines the use of CBEP by EPA's base programs and the degree of cooperation among programs on CBEP projects.

EPA'S Base Programs Lead EPA's Participation in Most CBEP Projects

CBEP was conceived not as a new program but as a new approach for EPA's existing programs to help attain sustainable communities and ecosystems goals and to better achieve environmental results. One of the tasks of the Regional CBEP Coordinators is to involve EPA's base program staff in CBEP activities and to integrate the CBEP approach into base program initiatives. The regions have made substantial progress toward integrating the CBEP approach and reorienting base programs with CBEP. At present, approximately 60 percent of the place-based CBEP projects analyzed for this report were initiated under EPA programs or initiatives. Moreover, most projects are led by base-program staff or involve cross-program teams.

Several Regions have used cross-program CBEP teams as an effective means of adopting CBEP to address place-based issues. All five Regions interviewed for this report use cross-program teams, and some (e.g., Region 5) use cross-program teams for all or almost all place-based CBEP projects. According to a Region 8 Project Leader, the work of cross-program teams is oriented toward problems and solutions rather than media and statutory authorities. Cross-program teams foster holistic, multimedia perspectives and ensure that all of the Agency's most appropriate expertise and resources are applied to solving environmental problems.

Cross-program teams have been used successfully to address agricultural issues in the Umatilla Basin and Columbia Plateau in Region 10. The Columbia Plateau Team includes representatives from at least seven EPA programs/offices: surface water, groundwater, air quality, pesticides, environmental assessment, Superfund, and outreach and external affairs. The team includes field staff with extensive familiarity with the project area. Many of the team members were active in the Columbia Plateau area before the initiative, but their activities were not necessarily coordinated. These activities are now coordinated and refocused on shared causes of environmental problems. A similar approach has been taken in the Umatilla Basin, where EPA and its partners are addressing the impacts of agricultural practices (e.g., tillage, nutrient application) on groundwater and surface water quality, air quality (i.e., dust from cultivation practices), and fisheries habitats (e.g., siltation, water quality).

Both of these projects consider the impacts of adopting alternative agricultural practices on environmental and community sustainability.

At times, CBEP Coordinators and Project Leaders had overcome incorrect perceptions about CBEP. For example, some base program staff and managers have viewed CBEP as a new program taking resources away from existing activities, or as merely a method of outreach and communication. In practice, however, CBEP has helped the base programs achieve their goals in situations where traditional approaches have failed. In Region 8, for example, EPA's use of the CBEP approach in the Grantsville Initiative has helped to persuade a large magnesium processing company to explore voluntary pollution control options. EPA's Enforcement Program had been unsuccessful in negotiating with the company using traditional approaches. Although further education about CBEP would be helpful within EPA, CBEP is now enthusiastically supported by many base program personnel who have participated in CBEP projects.

EPA's Base Programs Use CBEP to Solve Difficult Challenges and Add Value to Existing Efforts

Some environmental problems involve complex social, political, economic, or other issues that can be difficult to resolve with EPA's traditional regulatory, command-and-control approaches. Because CBEP enables EPA to work on these related issues while continuing to carry out its statutory and regulatory responsibilities, the base programs have used CBEP for some of their most difficult problems. In addition, the base programs use CBEP for problems that are not amenable to the existing regulatory and statutory frameworks.

CBEP has been used to resolve stakeholder conflicts involving RCRA corrective actions, Superfund and brownfield cleanups, development of Environmental Impact Statements, and other base program actions. For example, Region 8 recommended CBEP to the City Council of Casper, Wyoming, as a way to settle conflicts over a RCRA corrective action and closure facility in the City. Although disagreements remain, progress has been made and all stakeholders now have a better understanding of the pollution at the site and the RCRA process. Community stakeholders formed a work group to develop a vision for redevelopment of the site after it is restored and closed. Similarly, Region 8 used CBEP to resolve wetlands and development conflicts in the San Miguel Watershed.

EPA has used CBEP to resolve environmental conflicts and improve environmental decisionmaking in the context of major Environmental Impact Statements involving management of the Missouri and Mississippi Rivers, in Regions 8 and 5 respectively. In both cases, draft Environmental Impact Statements were criticized by stakeholders for failing to consider important ecosystem components and dynamics.

EPA has encouraged consensus building and ecosystem scale perspectives (e.g., in monitoring and assessments) to supplement the traditional NEPA model.

In a rapidly-growing community in Utah, local residents believe there is an unusually high cancer rate in their community and are very concerned about air pollution from a number of nearby facilities. EPA is using CBEP to coordinate activities to investigate pollution sources and health effects in the community and to provide information demanded by the residents. One of the largest pollution sources is subject to little regulation (e.g., Maximum Achievable Control Technology (MACT) rule is scheduled for 2001) and had been uncooperative with EPA's enforcement program. But since CBEP has been used, the company has voluntarily begun to investigate pollution control equipment.

EPA's base programs use CBEP to address environmental problems (e.g., urban sprawl, illegal solid waste dumping) that often are identified as high priorities at the community level, but have not traditionally been addressed by the Agency. For example, the Southeast Michigan Initiative (Region 5) is working with partners to combat illegal dumping of solid waste. Although EPA's Division of Solid and Hazardous Waste traditionally has not worked on this issue, the community identified it as a priority environmental problem. This is an example of a quality-of-life issue which is a high priority for local citizens.

EPA's Base Programs Use CBEP to Solve Problems That Cut Across Media- or Statutory-Lines or That Would Not Otherwise Be Addressed

CBEP enables EPA to address problems that cannot be addressed adequately by the statute-oriented base programs. CBEP encourages EPA to ask "how can we help solve the problem?," rather than "what do we have the authority to do?" This perspective is needed for environmental problems that cut across EPA's media-based programs or that fall through the cracks of EPA's statute-based programs.

In Chicago, odors are the leading source of complaints to air quality authorities. In the past, local, state, and EPA air programs have not addressed odor problems. However, EPA's Greater Chicago Team (Region 5) is coordinating efforts by these agencies to respond to odor problems. In particular, a shared complaint tracking system has been established, and the agencies now conduct joint inspections and enforcement actions. Odor complaints now receive increased attention because they are recognized as more than a quality-of-life issue -- they affect public health (e.g., headaches) and impede economic development.

In other partnerships, the Greater Chicago Initiative negotiated with a developer to establish a nature park in the city and limit wetlands impacts, developed an atlas of biodiversity for the area, pooled resources to hire a pollution prevention outreach

specialist, supported a jobs-training program, supported an asthma education initiative, and engaged government partners and local communities in decisionmaking for several major environmental cleanup and enforcement activities.

In the Big Dry Creek Partnership (Region 8), three municipalities in the northern Denver metro area are coordinating efforts to monitor surface-water quality and to combat impacts associated with rapid development. EPA does not have authority to regulate development and urban planning as factors in nonpoint source pollution. However, it can provide technical assistance and encourage stakeholders to adopt non-regulatory and voluntary ways to mitigate development impacts.

Communities in a number of CBEP priority places (e.g., East St. Louis in Region 7, Southeast Michigan in Region 5, Northeast Ohio in Region 5) have identified illegal solid waste dumping as a priority environmental issue. EPA's partnerships with local authorities in these places have been very successful in controlling illegal dumping by using innovative enforcement methods. For example, EPA provided training for community police officers on how to identify and conduct enforcement actions against illegal dumping.

By engaging local stakeholders in discussions about their environment, CBEP sometimes leads to environmental benefits that could not have been foreseen. For example, the Upper Arkansas River Watershed Council (Region 8) began as an effort to coordinate federal activities in an area. However, as stakeholders began discussing issues on a regional scale, they agreed on the need to protect open space. Collectively, the stakeholders have undertaken efforts to protect undeveloped areas.

3. WORKING WITH COMMUNITIES

CBEP emphasizes partnerships with community stakeholder groups and opportunities for meaningful public participation. In addition, CBEP capacity-building activities empower communities to solve their own environmental problems in projects where EPA is not directly involved. This section describes selected accomplishments of EPA's work with communities, such as the development of new partnerships and organizations and capacity-building products and services.

New Institutions and Partnerships Are Forming to Resolve Environmental Problems Using CBEP Principles

In most CBEP projects, stakeholders are forming committees or organizations for communication, planning, and decisionmaking to solve environmental problems. These bodies may serve a number of needed functions, such as providing a forum for dispute resolution or regional- or ecosystems-scale planning and coordination. When these bodies are permanent, as they often are, they institutionalize CBEP principles outside EPA and provide a CBEP-based infrastructure for responding to future problems as they arise.

Hundreds of communities and thousands of stakeholders participate in bodies formed for CBEP projects. For many participants, CBEP has introduced new ways of relating to the environment (e.g., ecosystem perspectives), relating to and working with other stakeholders, and solving environmental problems. In addition, many stakeholders are learning environmental management concepts such as adaptive management¹ and the use of environmental indicators.

CBEP sometimes brings together stakeholders that may not have had good working relationships in the past. In the Southeast Michigan Initiative (Region 5), for example, "good neighbor projects" brought industry representatives together with concerned neighbors and resulted in voluntary efforts to improve local environmental quality. In addition, the good neighbor projects were a platform for EPA to provide targeted compliance assistance.

In the Hillsdale Lake Watershed Initiative (Region 7), representatives of farming and urban communities are now working together to solve water-quality problems associated with agricultural and urban runoff. Before the CBEP approach was used to establish a forum for this communication and cooperation, there was more "finger

¹ Adaptive management involves a regular review and evaluation of results in order to continuously revise and refine approaches by integrating the benefits of experience, new data, or new technologies.

pointing” than progress. Because CBEP is not driven by regulatory or enforcement time lines, it allows stakeholders time to build trust and to establish productive working relationships.

CBEP Produces Innovative and Effective Educational Techniques and Resources

Education and communication are components of many CBEP projects. EPA conducts training on EPA environmental laws, regulations, and technical subjects (e.g., risk assessment, site remediation) to educate stakeholders about issues and decision processes. In addition, EPA provides training on facilitation techniques and other skills stakeholders can use to solve problems on their own.

EPA and its partners in CBEP projects have used several unique and innovative forms of education and communication. As part of the Southeast Michigan Initiative (Region 5), EPA funded a “Teacher Training Institute” that provided 40 hours of environmental education for local teachers. In addition, the Initiative sponsored “Citizens Academies,” in which experts were brought in to discuss issues (e.g., lead, pesticides) of concern to the community. The Initiative also included seminars on “smart” growth and brownfields redevelopment for planners and developers.

The Kansas River Initiative (Region 7) organized the “Rolling Down the River Festival,” a traveling educational program in festival format that visited every community along a 180-mile stretch of the River. Eleven-thousand people attended the Festival. In addition, EPA funded “Classroom to the Environment,” in which school children were taken on environmental field trips involving the Kansas River. Also, EPA helped to write and fund a 13-part public television series called “Sunflower Journeys” that focussed on the Kansas River Valley.

As part of the Lake Michigan Initiative, EPA Region 5 provided funding for an educational boat tour around the Lake. A research vessel made ten stops in cities around the Lake. At each stop, school or scouting groups were taken out on the boat to learn about the Lake and to help collect water and sediment samples. A series of fact sheets and an interactive CD-ROM were developed as educational tools. The tour made front page headlines at each stop.

As sub-projects of the Southern Appalachian Assessment (Region 4), EPA and its partners produced a video and educational poster about red wolf reintroduction. Also, EPA supported the production of a video that traces the flow of water from the Appalachians to the Gulf of Mexico to teach about watersheds and water quality. In addition, EPA held well-attended and well-received public workshops on control of dogwood anthracnose.

CBEP Builds the Capacity of Communities to Solve Environmental Problems on Their Own

External capacity-building is a component of almost all place-based CBEP projects in which EPA is an active participant. Capacity-building is important for projects where stakeholders must continue on their own after EPA's direct support ends. In addition, the regions use capacity-building to support community-based efforts where EPA is not involved. EPA's primary means of external capacity-building are to supply data and information, training and technical assistance, or grants.

Capacity-building is a particularly important form of assistance to low-income and minority communities. Grants and training sponsored by the Southeast Michigan Initiative (Region 5) are providing environmentally-related job skills in environmental justice communities. For example, EPA supported a job training program for lead abatement, brownfields remediation, and hazardous materials handling to benefit the local economy while helping the environment.

One of the long-term objectives of the Mni-Sose Intertribal Water Rights Project (Region 7) is to assist 26 Native American Tribes of the Missouri River Basin in developing capacity and tools for natural resource protection on tribal lands. EPA is helping the tribes establish organizational infrastructure and expertise for environmental management within and among the tribes. For example, EPA provided training in environmental economics, stakeholder involvement and negotiation, and technical skills (e.g., GIS). In addition, EPA is providing funding to help the tribes develop community profiles that describe tribal histories and environmental, economic, and demographic characteristics and issues. One way in which the community profiles will be used is to document needs and challenges in grant proposals.

Region 3 emphasizes capacity-building through its Green Communities Program. The purpose of the program is to encourage communities to evaluate and address their own environmental needs in balance with social and economic concerns. As part of this Program, Region 3 prepared a *Green Communities Assistance Kit*, and supports partners (e.g., the Federal Home Loan Bank) interested in community-based environmental initiatives.

A number of other regions offer CBEP capacity-building resources over the Internet. For example, Regions 8 and 10 developed Internet web pages that describe grant programs available for community-based projects.

In addition to conducting four direct-involvement projects, Region 10 provides capacity-building grants for about 10 projects each year. The Region uses a portion of its RGI, pollution prevention, wetlands, nonpoint source, and other funds to create a

CBEP grant fund. Small grants are made to communities for CBEP activities (e.g., forming organizations, performing assessments).

EPA Provides Technical Assistance to Support Science-Based Environmental Management Decisions

EPA's technical assistance adds value and credibility to locally-led environmental management projects. EPA is able to provide expertise and resources needed by local decisionmakers. In some cases, EPA provides technical resources that would not otherwise be affordable or available, or that can be used to leverage valuable assistance from other partners.

For the Tri-State Initiative (Regions 4 (lead), 3, and 5), EPA expedited an air-quality monitoring program by assigning a staff person to live in the area for a year to operate the monitoring station. In addition, EPA assumed certain tasks that could be performed more efficiently by EPA than by its partners. For example, EPA was able to secure contracts for air modeling more quickly than the participating state governments.

EPA developed a sophisticated and successful water-quality monitoring system for the Hillsdale Lake Watershed Initiative (Region 7). The monitoring system provided local decisionmakers and the public with useful and high-quality data. Local partners saved more than \$100,000 over five years because they did not have to hire a contractor to provide this technical assistance.

Region 8 is using an innovative and highly-effective approach to provide technical assistance to small communities in Southwest Utah. EPA hired a local groundwater expert through the Senior Environmental Employees (SEE) Program to assess soil permeability and groundwater pollution and promote solutions to drinking water contamination. Local partners with EPA assistance, developed a model septic system ordinance that addresses the impact of septic tanks on groundwater in rapidly growing communities. So far, three of five counties in Southwest Utah have adopted the ordinance, and the other two are expected to adopt it soon. This is the only place where the SEE Program has been used in this way. In addition to a salary provided by EPA, the SEE representative was provided with office space from the local health agency and a car from the State of Utah.

CBEP Provides Opportunities for Locally-Led Decisions and Meaningful Public Participation

Because CBEP encourages bottom-up planning and decision-making, it provides more meaningful community involvement than traditional public participation

methods (e.g., hearings, comment periods). Stakeholders who feel a sense of “ownership” for a project are more likely to invest their own time, energy, and resources in its success.

The Lake Michigan Initiative in Region 5 demonstrates this CBEP value-added for public participation. In particular, CBEP transformed an existing public participation process and inspired stakeholders to assume active leadership in developing the Lakewide Management Plan (LaMP). Before CBEP, the Lake Michigan Forum was established to keep stakeholders involved in the development of the LaMP and Remedial Action Plans (RAPs) for Lake Michigan. Since EPA applied CBEP to its work with the Forum, the Forum has evolved from a dialog group into a partner. The Forum is taking the lead on several aspects of the Initiative. For example, it is the architect of the design of the LaMP document and is writing portions of the text. In addition, the Forum has developed and led a number of pollution prevention and outreach projects, and has leveraged EPA funds to obtain additional outside funding for its projects

The Tri-state Initiative gives community stakeholders a significant role in planning assessment activities conducted by EPA and state technical experts. The Initiative addresses long-standing public concerns about air quality and other environmental issues in an area encompassing parts of Ohio (Region 5), Kentucky (Region 4 (EPA lead)), and West Virginia (Region 3). As part of the Initiative, a Technical Committee composed of experts from the three EPA regions and the state agencies is performing joint monitoring and assessment studies to identify pollution sources and impacts. Community stakeholders, including citizens, environmental groups, and representatives of industry and academia, are members of a Citizens' Advisory Committee, which sets the agenda for the Initiative and makes sure that the Technical Committee is addressing community concerns. Although the Citizens' Advisory Committee has little participation in the technical aspects of the initiative, it is the driving force in planning, decision-making, and public outreach.

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4. ENVIRONMENTAL RESULTS AND OTHER ACCOMPLISHMENTS

CBEP accomplishments described in this section include environmental results, partnerships for solving long-term challenges, data and technical products and services, and improvements in community relations. These are the accomplishments most frequently described by the CBEP Project Leaders.

CBEP Produces Tangible Benefits in Environmental Quality

Since the CBEP approach was actively promoted in 1995, EPA regions have initiated dozens of place-based environmental projects and have applied CBEP principles in dozens of projects initiated under other EPA programs or initiatives. In all, there now are approximately 300 place-based CBEP projects. Many of those are beginning to show environmental results, including the examples presented below.

Through CBEP and the Clean Lakes Program (i.e., Clean Water Act section 314), Region 4 supported the West Point Lake Advisory Committee (Georgia) in a successful project to improve water quality in the Lake. EPA provided data and training on relevant scientific and regulatory issues, and funding for an analysis that identified goals and demonstrated the economic impact of pollution in the Lake. Also, EPA enforcement assistance has helped to control a major phosphorus point source. Because of the project, phosphorous loading to West Point Lake has declined by 70 percent. In addition, the Lake Advisory Committee was instrumental in the passage of a statewide low-phosphorus detergent bill and Lake Water Quality Standards. According to the Project Leader, the legislation and community support for lake quality standards would not have been possible without a community-based approach.

As part of the Northeast Ohio Initiative (Region 5), EPA joined the Ohio Attorney General and the Mayor of Cleveland in the Toxic Sweep Task Force. The impetus for the Task Force was a fire at an abandoned industrial complex. Several drums of hazardous waste burned in the fire, and the owners of the drums could not be identified. The Task Force partners pool resources and enforcement authority to cleanup properties, which are then available for redevelopment. In five years, the Task Force has cleaned up more than 100 properties.

As part of the Northwest Indiana Regional Geographic Initiative (RGI) (Region 5), a company has removed 30,000 gallons of sludge from its site, thereby removing a major source of contamination in the area. In addition, five industries have voluntarily agreed to institute a coordinated groundwater remediation program, and another industry will be undertaking a major contaminated-sediment cleanup over five miles of the Calumet River.

Included in the San Miguel Watershed Project (Region 8) is an effort to restore and re-create high alpine wetlands that have been impacted by development and invasive species. High alpine wetlands are extremely sensitive to hydrology and topography. Successful recreation of these wetlands requires careful design and excavation with a precision of six inches or less. A one-acre wetland has been restored. In addition, an invasive species, purple loosestrife, has been removed from acres of existing wetlands, and a four-foot-high pile of purple loosestrife seed has been collected and burned. In another aspect of the San Miguel Watershed Project, a mile of stream has been restored from impacts of upstream mining.

The Umatilla Basin CBEP Project (Region 10) has caused a number of farmers to use conservation tillage to benefit water quality. One of EPA's partners in the Project, the Natural Resource Conservation Service (NRCS), currently is monitoring water quality to estimate reductions in soil loss. Although numerical results (e.g., number of acres in conservation tillage, reduction in soil loss) are not yet available, significant benefits are expected to be measured.

As part of the Puget Sound Basin CBEP Project (Region 10), which involves EPA's National Estuary Program (NEP), local communities in forty watersheds in the basin have developed watershed plans to help control surface-water pollution. The benefits of these plans and other aspects of the project are beginning to be observed. For example, a celebration is held every time a shellfish bed can be reopened. Several celebrations were held in the summer of 1998.

CBEP Addresses Long-Term Environmental Challenges

CBEP often addresses environmental problems with diffuse or pervasive causes (e.g., nonpoint source pollution) that do not respond to command-and-control regulation. CBEP also frequently addresses complex problems that involve socio-cultural or economic issues, which cannot be solved by EPA alone. Restoration of Lake Michigan to its full ecological health and economic potential, for example, will require a coordinated effort of many stakeholders for many years. For such long-term challenges, it might take years before environmental results can be measured.

Before work can begin in the field, stakeholders must build mutual trust, establish working relationships, and agree on priorities, goals, objectives, and means of action. EPA's early role in many CBEP projects is to facilitate these crucial first steps, and many Project Leaders described these activities among their most important accomplishments. Although environmental results are the most important benchmarks for measuring EPA's performance, these process accomplishments should be recognized as critical milestones in addressing the challenging environmental problems.

CBEP Provides High-Quality Data Resources to Support Environmental Management Decisions

EPA and its CBEP partners have established shared data resources to directly support CBEP activities and to benefit future environmental management decisions in project areas. Examples include the Southern Appalachian Assessment, the Colorado Plateau Data Network, the Great Plains International Data Network, and data from many smaller monitoring and environmental indicator efforts.

The Colorado Plateau Data Network (Region 8) is a regional repository of environmental data available free on the Internet. EPA has helped stakeholders make use of the data by developing resource maps for particular uses. For example, in Flagstaff, Arizona, EPA developed GIS maps to support the "Neighborhoods Policy" to maintain urban forests.

The Great Plains International Data Network (Region 7), which EPA began to support before CBEP was established, is a cooperative effort by 13 states, 3 provinces of Canada, and parts of Mexico. The Network includes many kinds of environmental data on the Great Plains ecoregion collected by government agencies and academic researchers. The data are accessible for free over the Internet. In recent years, EPA's efforts have narrowed to focus on the Upper Missouri River, and EPA and its federal government partners have established a smaller Internet database for that section of the River. These data are being used for ecosystem management activities in the Upper Missouri River Basin.

At the request of the Chatham County/Savannah Metropolitan Planning Commission, EPA Region 4 provided funding and technical assistance to resolve uncertainty and controversy associated with wetlands delineation for coastal flatwood communities in Chatham County. The project produced a detailed cover map for the study area and a GIS-based assessment model that can be used for any site in the lower coastal plain. These products will be used to protect wetlands, plan water supplies, site a sewage treatment plant, and select wetland restoration projects.

The Southern Appalachian Assessment (Region 4) provides comprehensive and credible data needed for land management planning (e.g., forest management plans) in a broad area reaching from Virginia to Alabama. The data, which are accessible over the Internet, are intended to support individual management plans by allowing users to determine how the lands, resources, people, and management practices interrelate within the larger context of the ecosystem. Its scope includes four individual assessment reports covering the atmospheric, social/cultural/economic, terrestrial, and aquatic components of the ecosystem. The Southern Appalachian Assessment is one of few comprehensive assessments at a large geographic scale. Also, its Project Leaders received Vice President Al Gore's Hammer Award. The Hammer Award is the

Vice President's special recognition to teams of federal employees who have made significant contributions in support of the President's National Performance Review (NPR) principles: putting customers first, cutting red tape, empowering employees, and getting back to basics.

CBEP Improves Community Perceptions of EPA

In interviews with Regional CBEP Coordinators and Project Leaders, one of the most frequently and emphatically reported benefits of CBEP was improved perceptions about EPA among a wide range of constituencies. For example, CBEP projects are making partners of stakeholder groups that have opposed EPA in the past. According to the Region 7 CBEP Coordinator, EPA's base programs are beginning to realize that CBEP contributes to EPA's acceptance and credibility in the field.

According to Project Leaders, CBEP stakeholders often join projects with negative perceptions about EPA. For example, many communities and stakeholders know EPA primarily as an outside enforcer, but not necessarily as a partner and problem solver. In other cases, EPA is perceived as a distant bureaucracy that is out of touch with local issues, resources, and stakeholders.

For many stakeholders, CBEP represents a welcome change in EPA's way of doing business. For example, the Southwestern Utah Environmental Partnership (Region 8) has improved EPA's standing with local and county governments by showing itself to be a helpful partner, not just as an enforcer. EPA benefitted local agencies and the environment by providing expertise and resources to address the top local concerns. According to the Project Leader, "EPA's political capital [in the area] has grown off the chart."

The government of a Midwestern city once opposed EPA's listing of a hazardous waste site on the National Priorities List because of the perceived stigma of having a Superfund site in the community. However, EPA's work in the community on a variety of other issues has changed perceptions and the community now welcomes EPA's Superfund activities. The community also has become a partner in cleanup decisionmaking.

Direct-EPA-involvement CBEP projects usually entail frequent visits to local communities (e.g., to attend meetings) by EPA staff. In some cases, Project Leaders or project team members temporarily relocate to the project area or are stationed in local field offices. A physical presence in the community enhances CBEP implementation and the public attitudes toward the EPA. Several Project Leaders credited CBEP with giving the Agency "a face" in the community. In addition, Project Leader interviews included several anecdotes to illustrate how a physical presence in communities

improved trust of EPA, raised environmental awareness, or enhanced EPA's delivery of services.

CBEP can improve EPA's community relations by providing a single, familiar point of contact with the Agency. At least three Project Leaders described a lack of coordination and integration of EPA's programs as a perceived failing of EPA's interaction with regulated communities. For example, small governments or businesses with limited staff or resources for environmental compliance may feel besieged by uncoordinated and unconnected interactions with EPA's media programs. This had been the experience of Native American Tribes working with EPA in the Mni-Sose Intertribal Water Rights Project (Region 7). However, CBEP provided a single point of contact (i.e., the CBEP Project Leader) with the Agency and a way to capture all of the EPA requirements under one umbrella. In addition, the EPA point of contact helped to improve the Tribes' interactions with other federal agencies. According to the Project Leader, CBEP has shown the tribes that, "we know how to meet our trust responsibilities. And they have really appreciated that."

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5. CONCLUSIONS

EPA's Strategic Plan (U.S. EPA, 1997) recognized CBEP as the Agency's main tenet for "reinventing" its approach to environmental protection by considering environmental problems across organizational and political boundaries and in a multimedia fashion. CBEP enables community-led projects that will achieve long-term ecological, social, and economic well-being.

Since the CBEP approach was actively promoted in 1995, EPA regions have instituted CBEP in approximately 300 place-based projects, many of which involve the Agency's most pressing environmental challenges (e.g., nonpoint source pollution) and/or the management of regionally and nationally-important natural resources. In addition to the projects where EPA is directly involved, CBEP capacity-building activities provide information and resources for community-led environmental protection projects.

The accomplishments of CBEP activities presented in this report are based on interviews with EPA regional personnel and data collected for a sample of 87 projects in six regions. Exhibit 1 lists the key accomplishments and benefits of CBEP identified from interviews and CBEP project data.

Essentially all major EPA programs and initiatives participate in or lead CBEP projects. Increasingly, base program staff and managers are recognizing CBEP as a useful approach for resolving difficult challenges with complex social, economic, or multimedia issues. Also, CBEP is useful for problems that are difficult to solve using traditional command-and-control approaches. In general, CBEP focuses on problems and solutions rather than media and statutory authorities.

CBEP principles and approaches are now institutionalized in dozens of new partnerships and organizations that have formed at the community level. Through the CBEP approach, EPA has provided valuable technical assistance and other resources to communities and taught many stakeholders new ways of relating to and managing the environment (e.g., using environmental indicators and adaptive management). The institutionalization of CBEP principles and science-based environmental management practices outside EPA will contribute to the resolution of future problems as they arise.

Although CBEP addresses complex challenges that can take years of coordinated effort to solve, environmental results are already evident in many projects. Recent influences such as the Draft CBEP Framework (U.S. EPA, 1998) and the Governmental Performance and Results Act (GPRA) are prompting more projects to use quantitative goals, environmental indicators, and other means of measuring progress and results.

In addition to tangible environmental results, CBEP provides a number of intangible benefits. Most important, CBEP projects have been very successful in improving community perceptions about EPA. For example, many stakeholders that know EPA only as a distant regulator and enforcer are now seeing EPA as a partner, provider or assistance, and a problem solver as well.

As discussed in the companion report *Community-Based Environmental Protection (CBEP): Characterization of EPA Regional CBEP Activities* (U.S. EPA, 1999), further progress can be made in EPA's implementation of CBEP. However, CBEP activities have already produced significant accomplishments and value-added to existing initiatives. These benefits should continue to grow as EPA issues the CBEP Framework and the Agency continues to incorporate CBEP principles in its efforts to accomplish its mission.

6. REFERENCES

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